TABLE 3

"C" Factors for Permanent Pasture and Nursery 1/

Vegetative Canopy			Cover that Contacts the Surface					
Type and Height of Raised Canopy 2/	Percent Cover 3/	Type 4/	Percent Ground Cover 0	20	40	60	80	95-100
No appreciable canopy		G	.45	.20	.10	.042	.013	.003
		W	.45	.24	.15	.091	.043	.011
Canopy of tall weeds or short brush (0.5 m Av. drop fall height 20 in.)	25	G	.36	.17	.09	.038	.013	.003
		W	.36	.20	.13	.083	.041	.011
	50	G	.26	.13	.07	.035	.012	.003
		W	.26	.16	.11	.076	.039	.011
	75	G	.17	.10	.06	.032	.011	.003
		W	.17	.12	.09	.068	.038	.011
Appreciable brush or bushes (2 m Av. drop fall height 6 1/2 ft.)	25	G	.40	.18	.09	.040	.013	.003
		W	.40	.22	.14	.087	.042	.011
	50	G	.34	.16	.08	.038	.012	.003
		W	.34	.19	.13	.082	.041	.011
	75	G	.28	.14	.08	.036	.012	.003
		W	.28	.17	.12	.078	.040	.011
Trees but no appreciable low brush (4 m Av. drop fall height 13 ft.)	25	G	.42	.19	.10	.041	.013	.003
		W	.42	.23	.14	.089	.042	.011
	50	G	.39	.18	.09	.040	.013	.003
		W	.39	.21	.14	.087	.042	.011
	75	G	.36	.17	.09	.039	.012	.003
		W	.36	.20	.13	.084	.041	.011

1/ All values shown assume: (1) random distribution of mulch and/or vegetation, and (2) mulch of appreciable depth where it exists.

2/ Average drop fall height of waterdrops from canopy to soil surface: m = meters and ft = feet.

3/ Portion of total-area surface that would be hidden from view by canopy in a vertical projection, (a bird's-eye view).

4/ G: Cover at surface is grass, grasslike plants, decaying compacted duff, or litter at least 1/2 inches deep.

W: Cover at surface is mostly broadleaf herbaceous plants (as weeds with little lateral-root network near the surface) or undecayed residue or both.

Universal Soil Loss Equation (USLE)
Cropland C-Factors

Additional C-Factors
(From hand-written notes on various editions of FOTG)

Crop	C-Factor	Source
Sweet corn, continuous, conventional, no cover	.36	RISO FOTG
Grain corn, high management, conventional, no cover	.15	RISO FOTG (T. Dodge, 3/94)
Pumpkins, rye cover	.26	Vernon FOTG (F. Zaik)
Sudan grass	.13	Vernon FOTG (F. Zaik)
Grain sorghum	.3	Brooklyn FOTG (F. Zaik)
Turf grass up before 9/15	.19	Middletown FOTG (Zaik & Dodge, 7/87)
Turf grass up after 9/15	.42	Middletown FOTG (Zaik & Dodge, 7/87)
Hay after hay, conventional plow, establishment year	.03	Middletown FOTG
4 yrs. Rhodos, 1 yr. buckwheat green manure, start cultivating 6/1	.20	Middletown FOTG (J. Lemunyon, 1988)
4 yrs. Rhodos, 1 yr. buckwheat green manure, start cultivating 5/15	.21	Middletown FOTG (J. Lemunyon, 1988)
Japanese millet instead of buckwheat, start cultivating 5/15	.20	Middletown FOTG (J. Lemunyon, 1988)
4 yrs. Rhodos, wheat after fall dig, legume frost-seeded & in for 1 yr.	.19	Middletown FOTG (J. Lemunyon, 1988)
4 yrs rhodos, no green manure year	.25	Middletown FOTG (J. Lemunyon, 1988)
Yews	Add .02	Middletown FOTG (J. Lemunyon, 1988)
Vineyard, permanent grass, 7' rows	.026	Middletown FOTG
Vineyard, permanent grass, 8' rows	.020	Middletown FOTG
Vineyard, permanent grass, 9' rows	.016	Middletown FOTG
Vineyard, early oat cover	.10	Middletown FOTG

TABLE 4

A HORIZON "K" VALUES AND "T" VALUES FOR NON-STONY TILLABLE SOILS--RHODE ISLAND

.17	.20	.24	.28	.49
DEERFIELD#	LIPPITT@	BIRCHWOOD	AGAWAM	BRIDGEHAMPTON
HINCKLEY	PODUNK#	CANTON	BROADBROOK	BRIDGEHAMPTON,
QUONSET	(POOTATUCK)	CHARLTON	LEICESTER	TILL SUBSTM
WINDSOR#	POOTATUCK#	GLOUCESTER	NARRAGANSETT	ENFIELD
	POQUONOCK	MERRIMAC	NEWPORT	RAYPOL
	RIPPOWAM#	PAXTON	NINIGRET	SCIO
	RUMNEY#	RIDGEBURY	PITTSTOWN	TISBURY
	(RIPPOWAM)	SUDBURY	RAINBOW	
	WALPOLE	SUTTON	STISSING	
		WOODBRIDGE	WAPPING	

@ "T" VALUE = 2
# "T" VALUE = 5
ALL OTHER "T" VALUES = 3

TABLE 5

Practice Factor "P"

1.) P Values for Up and Downhill Farming, Cross-slope Farming (without strips) and Contouring Including Maximum Slope Lengths 1/ for the latter.

Land Slope Percent	P Values		P Value For Contouring	Maximum Slope Length for Contouring 1/ (feet)
	Up and Downhill	Cross-slope Farming (without strips)		
1-2	1.0	0.80	0.60	400
3-5	1.0	0.75	0.50	300
6-8	1.0	0.75	0.50	200
9-12	1.0	0.80	0.60	120
13-16	1.0	0.85	0.70	80
17-20	1.0	0.90	0.80	60
21-25	1.0	0.95	0.90	50

1/ Limit may be increased by 25 percent if residue cover after crop planting will regularly exceed 50 percent.

2.) P Values, Maximum Strip Widths, and Slope-Length Limits for Contour Strip-cropping.

Land Slope Percent	P Values 1/			Strip Width 2/	Maximum Slope Length
	A	B	C		
				Feet	Feet
1 to 2	0.30	0.45	0.60	130	800
3 to 5	.25	.38	.50	100	600
6 to 8	.25	.38	.50	100	400
9 to 12	.30	.45	.60	80	240
13 to 16	.35	.52	.70	80	160
17 to 20	.40	.60	.80	60	120
21 to 25	.45	.68	.90	50	100

1/ P Values:

A For 4-year rotation of row crops, small grain with meadow seeding, and 2 years of meadow. A second row crop can replace the small grain if meadow is established in it. For longer rotations with 50% or greater sod crop.

B For 4-year rotation of 2 years row crop, winter grain with meadow seeding and 1-year meadow.

C For alternate strips of row crop and small grain.

2/ Adjust strip-width limit, generally downward, to accommodate widths of farm equipment.

SUPPORT PRACTICE FACTOR (P)

The Soil Conservation Service (SCS) has worked closely with the Agricultural Research Service (ARS) to develop an improved procedure to determine practice factor values. The result is a set of table values for determination of the (P) factor based on field slope, row gradient, and crop ridge height. If the ridge height varies significantly throughout the year, a weighted value based on ridge height and the percent time of the crop year it occurs must be used. The tables also factor in the 10-year single-storm Erosion Index (EI) values. Contour and cross-slope (P) values can be obtained from these tables. When determining the (P) factor for contour stripcropping, the (P) factors presented in the tables become the contour subfactor, which is in turn multiplied by the stripcropping subfactor to arrive at the proper (P) factor.

DIRECTIONS FOR USE

CONTOURING AND CROSS-SLOPE FARMING

The P factor tables are presented according to a series of ridge heights. Ranges are low (1-3 in.), moderate (3-5 in.), and ridged where height exceeds 6 inches.

First, determine the ridge height appropriate to the crop in question. The ridge height is defined as the height of the crop ridge throughout the crop growing season. If the ridge height cannot be determined, consider the tillage operations and any tillage oriented roughness height as the ridge height to use. Silage corn is usually low ridge, unless ridge-tilled or cultivated. Small grain crops would usually be low ridge (1-3 inches high). Potatoes and other vegetables might have moderate to high ridges.

Second, determine the appropriate table based on the area where the field occurs. Northern Rhode Island, Windham, Tolland, Hartford, and Litchfield Counties are to use Tables 5A, 5B, or 5C, which have an EI factor of 60. Southern and Eastern Rhode Island, New London, Middlesex, New Haven, and Fairfield Counties are to use Tables 5D, 5E, and 5F, which have an EI factor of 80. The EI factors represent an average within a range of conditions within the counties.

Third, enter the appropriate table from the left and determine the average downhill slope of the field being considered. The row grade or deviation from the contour is given in percent at the top of the table. Follow row and column to arrive at the P value for the field in question.

The Practice Factor (P) is 1.0 for Up and Down Slope farming.

EXAMPLE

GIVEN: The field is located in Windham County and the crop is silage corn, conventionally tilled, where the only ridge or hilling is the oriented roughness from field fitting and planting operations. The field is on a 6 percent slope with 2 percent row gradient.

SOLUTION: From Table 5A entitled "Contour P Factor Values," (Windham County is an EI of 60), at the intersection of 6 percent downhill slope and 2 percent row grade, read a contour P factor value of 0.85. If in the above example the pattern of harrowing and planting was around and around the field as many farmers do, the percent of the field that contouring occurs on would have the 0.85 value, the remaining portions of the field would have a value of 1.0 (no effect). If the field were evenly divided up and down the slope and across the slope with the 2 percent row grade, the P value would be 0.93. This is arrived at by the following: $\frac{1.0 + 0.85}{2}$ = 0.925 or rounded to 0.93. If 75% of the field had the 0.85 value, the solution is: 0.85 X 75 = 0.63 + 1.0 X 0.25 = 0.25; 0.63+ 0.25 = 0.88.

STRIPCROPPING

If that same field were contoured and stripcropped with a rotation of R_c M M M (corn strips with cover and grass strips), the (P) factor would be 0.64. This factor is derived in the following manner: Enter the same table (Table 5A). Using the row grade of 2 percent and the downhill slope of 6 percent, the factor is 0.85. When stripcropping, the 0.85 (P) factor becomes a subfactor which must be multiplied by an additional subfactor to account for the position or placement of sod or small grain on the slope. This additional (P) subfactor is presented below in the section entitled, Stripcropping (P) Subfactors.

STRIPCROPPING (P) SUBFACTORS

The correct stripcropping subfactor to use is based on the rotation in place and the type crops grown. For a (P) factor benefit, there must be a strip which generates sediment and one which traps sediment. Therefore, in a rotation where a grass strip is immediately above a second grass strip the (P) subfactor is 1.0 or no benefit. When corn and grass are adjacent, the subfactor is 0.5. When a row crop is adjacent to a small grain, the subfactor is 0.75. The various conditions are averaged in the following manner to arrive at the proper subfactor.

Strip A	R_c	M	M	M
Strip B	M	R_c	M	M
	0.5	0.5	1.0	1.0 = 3.0

(P) subfactor Average = $\frac{3.0}{4}$ = 0.75 yr sequence

This (P) subfactor average of 0.75 X the average annual Contour (P) subfactor of 0.85 (above) = 0.64